



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/635,644	08/07/2003	Takeshi Kamata	030947	8810
23850	7590	08/24/2004	EXAMINER	
ARMSTRONG, KRATZ, QUINTOS, HANSON & BROOKS, LLP			KOCH, GEORGE R	
1725 K STREET, NW				
SUITE 1000			ART UNIT	
WASHINGTON, DC 20006			PAPER NUMBER	
			1734	

DATE MAILED: 08/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/635,644

Applicant(s)

KAMATA ET AL.

Examiner

George R. Koch III

Art Unit

1734

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) 1 and 2 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 3-8 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 August 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-2, drawn to a method for coating an electrical cable, classified in class 427, subclass 421.
- II. Claims 3-8, drawn to an apparatus for coating an electrical cable, classified in class 118, subclass 685.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions I and II are related as process and apparatus for its practice.

The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case the apparatus as claimed can perform a materially different process, such as coating yarn, optical fibers, or surgical thread.

3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

4. Because these inventions are distinct for the reasons given above and the search required for Group I is not required for Group II, restriction for examination purposes as indicated is proper.

5. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

6. During a telephone conversation with Donald Hanson on 8/11/2004 a provisional election was made with traverse to prosecute the invention of group 2, claims 3-8. Affirmation of this election must be made by applicant in replying to this Office action. Claims 1-2 withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

7. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Drawings

8. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "6" has been used to designate both the coating layer and the endless belt (in Figure 2). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s)

should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

9. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: 28. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

10. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

11. Claims 3-8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

12. In line 1 of claim 3, applicant begins the preamble with "An electrical coating apparatus". In line 3 of claim 3, applicant concludes the phrase "the method comprising". It is unclear whether applicant intends to claim a method or apparatus. Based on the elements and the dependent claims, it appears applicant is claiming an apparatus, and claims 3-8 have been examined as apparatus.

Double Patenting

13. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

14. Claim 3 is provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-2 of copending Application No. 10/825,220. Although the conflicting claims are not

Application/Control Number: 10/635,644

identical, they are not patentably distinct from each other because the instant invention calls for a coating liquid jet means, and claim 1 of application 10/825,220 recites coloring nozzles (a type of coating liquid jet means), each which spout a coloring agent, a specific type of coating liquid, on the other surface of the electrical cable (a different term for electrical wire). Claim 1 of US Patent 10/825,220 also recites the uses claimed in claim 3 - the plurality of nozzles provides the ability to jet at regular intervals.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

15. Claims 5 is provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-2 of copending Application No. 10/825,220 as applied above in view of Katzschner (US 4,503,437).

As to claim 5, the claims of US 10/825,220 do not recite storage means, detection means, and control means as claimed.

As to claim 5, Katzschner discloses storage means (item SP, see Figures 3 and 4) for storing a pattern for depositing the coating liquid on the outer surface of the electrical cable (as described in column 3, line 28 to column 5), detection means (item DG) for measuring the moving speed of the electrical cable, and control means (items SK and ST) for controlling the coating liquid jet means to jet a coating liquid on the outer surface of the electrical cable to deposit the coating liquid on the outer surface to define the pattern based on the electrical cable

Application/Control Number: 10/635,644

moving speed measured by the detection means (described in column 3, lines 14-53). One in the art would appreciate that such structures ensure accuracy in application of coating material to the electrical wire or cable. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have utilized such storage means, detection means, and control means in order to ensure coating accuracy.

This is a provisional obviousness-type double patenting rejection.

16. Claims 4, 7-8 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-2 of copending Application No. 10/825,220 as applied to claim 3 above in view of Katzschner (US 4,503,437) and Gemelli (US Patent 3,903,840).

As to claim 4, the claims of US 10/825,220 do not recite colorant jetting means, detection means, a storage device, or control means as claimed.

With regard to claim 4, Katzschner discloses detection means (item DG) for measuring the moving speed of the electrical cable, a storage device (item SP, see Figures 3 and 4) which stores distance information between multiple nozzles (as described in column 3, line 28 to column 5), and control means (items SK and ST) for controlling the coating liquid jet means to jet a coating liquid on the outer surface of the electrical cable to deposit the coating liquid on the outer surface to define the pattern based on the spray pattern (including defined distances between multiple nozzles) and the electrical cable moving speed measured by the detection means (described in column 3, lines 14-53).

One in the art would appreciate that such detection means, storage devices, and control means, as disclosed in Katzschner, ensure accuracy in application of coating material to the electrical wire or cable. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have utilized such detection means, storage devices, and control means in order to ensure coating accuracy.

Katzschner discloses a single jetting means with multiple nozzle, but does not disclose that the multiple means are capable of functioning as colorant jetting means disposed upstream from the coating liquid jet means in the cable moving direction for jetting a given amount of colorant at the regular intervals on the outer surface of the electrical cable.

Furthermore, Gemelli discloses that it is known to utilize multiple jetting means with multiple material supplies (column 3, lines 37-40) in a linear pattern (shown in Figures) in order to provide multiple colorings are multiple stripes, or to achieve variation in marking spacing and/or color (abstract). One in the art would immediately appreciate that these second means allow for multiple-colored coating pattern (see column 3, lines 32-42). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have provided second jetting means for providing colorant in order to allow for multiple colored coating patterns as suggest in Gemelli.

As to claim 7, the claims of US 10/825,220, and the single jetting means of Katzschner, when modified as suggested by Gemelli to provide multiple coating/colorant liquids by providing multiple jetting means, is capable of

Application/Control Number: 10/635,644

providing marks in dot form as claimed. Furthermore, Katschner discloses lines of dots (see Figures 2, 3, and 4).

As to claim 8, the claims of US 10/825,220, and the single jetting means of Katschner, when modified as suggested by Gemelli to provide multiple coating/colorant liquids, is capable of providing overlapped coating as claimed. Gemelli's arrangement of the jetting means into a linear order allows for overlapping.

This is a provisional obviousness-type double patenting rejection.

17. Claim 6 is provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 2 of copending Application No. 10/825,220 in view of Smyczek (US 5,444,466) and the admitted prior art (pages 1 and 2 of the specification).

The claims of US 10/825,220 do not recite that the apparatus is combined with a cutting unit for cutting the electrical cable after the electrical cable is moved as much as a given distance in the predetermined direction.

Smyczek discloses combining a wire marking system (item 21) utilizing jetting coating means with a cutting unit for cutting the wires (called a processing unit, see columns 3, lines 29-63). The admitted prior art discloses that in the automotive industries, precut wires are needed for wiring applications with wiring harnesses (page 1, line 26 to page 2, line 5). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have

Application/Control Number: 10/635,644

utilized such cutting units in order to ensure that the wires are properly sized for automotive applications.

This is a provisional obviousness-type double patenting rejection.

Claim Rejections - 35 USC § 102

18. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

19. Claim 3 is rejected under 35 U.S.C. 102(b) as being anticipated by Unterberger (US Patent 5,645,899).

Unterberger discloses an electrical cable coating apparatus (see Figure 1) for providing a coating layer on an outer surface of an electrical cable which is moving along a predetermined direction, the apparatus comprising: a coating liquid jet means (structures DV) for jetting a given amount of coating liquid at regular intervals on the outer surface of the electrical cable to provide a coating layer on the outer surface of the electrical cable. Unterberger is capable of using

a coating liquid that includes a coating material for defining the coating layer and a solvent for dissolving the coating material.

20. Claims 3 and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by Katschner (US 4,503,437)

Katschner discloses an electrical cable coating apparatus (see Figure 1) for providing a coating layer on an outer surface of an electrical cable which is moving along a predetermined direction, the apparatus comprising: a coating liquid jet means (structures SK) for jetting a given amount of coating liquid at regular intervals on the outer surface of the electrical cable to provide a coating layer on the outer surface of the electrical cable. Katschner is considered capable of, and further discloses, using a coating liquid that includes a coating material for defining the coating layer and a solvent for dissolving the coating material (column 4, line 61 to column 5, line 3).

As to claim 5, Katschner discloses storage means (item SP, see Figures 3 and 4) for storing a pattern for depositing the coating liquid on the outer surface of the electrical cable (as described in column 3, line 28 to column 5), detection means (item DG) for measuring the moving speed of the electrical cable, and control means (items SK and ST) for controlling the coating liquid jet means to jet a coating liquid on the outer surface of the electrical cable to deposit the coating liquid on the outer surface to define the pattern based on the electrical cable moving speed measured by the detection means (described in column 3, lines 14-53).

Claim Rejections - 35 USC § 103

21. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

22. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

23. Claims 4 and 7-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Katzschner as applied above to claims 3 above, and further in view of Gemelli (US Patent 3,903,840).

As recited above, Katzschner discloses the limitation of claim 3, an electrical cable coating apparatus (see Figure 1) for providing a coating layer on an outer surface of an electrical cable which is moving along a predetermined direction, the apparatus comprising: a coating liquid jet means (structures SK) for jetting a given amount of coating liquid at regular intervals on the outer surface of the electrical cable to provide a coating layer on the outer surface of the electrical

cable. Katzschner is considered capable of, and further discloses, using a coating liquid that includes a coating material for defining the coating layer and a solvent for dissolving the coating material (column 4, line 61 to column 5, line 3).

With regard to claim 4, Katzschner discloses detection means (item DG) for measuring the moving speed of the electrical cable, a storage device (item SP, see Figures 3 and 4) which stores distance information between multiple nozzles (as described in column 3, line 28 to column 5), and control means (items SK and ST) for controlling the coating liquid jet means to jet a coating liquid on the outer surface of the electrical cable to deposit the coating liquid on the outer surface to define the pattern based on the spray pattern (including defined distances between multiple nozzles) and the electrical cable moving speed measured by the detection means (described in column 3, lines 14-53).

Katzschner discloses a single jetting means with multiple nozzle, but does not disclose that the multiple means are capable of functioning as colorant jetting means disposed upstream from the coating liquid jet means in the cable moving direction for jetting a given amount of colorant at the regular intervals on the outer surface of the electrical cable.

However, Gemelli discloses that it is known to utilize multiple jetting means with multiple material supplies (column 3, lines 37-40) in a linear pattern (shown in Figures) in order to provide multiple colorings are multiple stripes, or to achieve variation in marking spacing and/or color (abstract). One in the art would immediately appreciate that these second means allow for multiple-colored coating pattern (see column 3, lines 32-42). Therefore, it would have been

obvious to one of ordinary skill in the art at the time of the invention to have provided second jetting means for providing colorant in order to allow for multiple colored coating patterns as suggest in Gemelli.

As to claim 7, the single jetting means of Katzschner, when modified as suggested by Gemelli to provide multiple coating/colorant liquids by providing multiple jetting means, is capable of providing marks in dot form as claimed. Furthermore, Katschner discloses lines of dots (see Figures 2, 3, and 4).

As to claim 8, the multiple jetting means of Katzschner, when modified as suggested by Gemelli to provide multiple coating/colorant liquids, is capable of providing overlapped coating as claimed. Gemelli's arrangement of the jetting means into a linear order allows for overlapping.

24. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over either Untenberger or Katzschner as applied to claim 3 above, and further in view of Smyczek (US Patent 5,444,466) and the admitted prior art (pages 1 and 2 of the specification).

Both Unterberger and Katzschner disclose an electrical cable coating apparatus for providing a coating layer on an outer surface of an electrical cable which is moving along a predetermined direction, the apparatus comprising: a coating liquid jet means for jetting a given amount of coating liquid at regular intervals on the outer surface of the electrical cable to provide a coating layer on the outer surface of the electrical cable. Both Unterberger and Katzschner are

Application/Control Number: 10/635,644

capable of using a coating liquid that includes a coating material for defining the coating layer and a solvent for dissolving the coating material.

Neither Unterberger nor Katzschner suggest that the apparatus is combined with a cutting unit for cutting the electrical cable after the electrical cable is moved as much as a given distance in the predetermined direction.

Smyczek discloses combining a wire marking system (item 21) utilizing jetting coating means with a cutting unit for cutting the wires (called a processing unit, see columns 3, lines 29-63). The admitted prior art discloses that in the automotive industries, precut wires are needed for wiring applications with wiring harnesses (page 1, line 26 to page 2, line 5). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have utilized such cutting units in order to ensure that the wires are properly sized for automotive applications.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to George R. Koch III whose telephone number is (571) 272-1230 (TDD only). If the applicant cannot make a direct TDD-to-TDD call, the applicant can communicate by calling the Federal Relay Service at 1-866-377-8642 and giving the operator the above TDD number. The examiner can normally be reached on M-Th 10-7.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher Fiorilla can be reached on (571) 272-1187.

Application/Control Number: 10/635,644

The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



George R. Koch III
Patent Examiner
Art Unit 1734

GRK
August 17, 2004